

WHAT IS CLAIMED IS:

- 1           1. A storage library comprising:
  - 2           a frame having an interior and a frame length;
  - 3           a first storage library module having a first set of media element holding cells, the first storage library module being mounted to the frame at a first position along the frame length, the frame supporting the first storage library module such that the first set of cells are positioned within the frame interior at the first frame length position and along the periphery of a channel extending within the frame interior through the frame length;
  - 9           a second storage library module having a second set of media element holding cells, the second storage library module being mountable to the frame at a second position along the frame length, the frame supporting the second storage library module when the second storage library module is mounted to the frame such that the second set of cells are positioned within the frame interior at the second frame length position and along the periphery of the channel;
  - 15          a media element handling assembly having a support and a picker assembly, the support being connected to the frame at a third position along the frame length, the picker assembly being movably connected to the support;
  - 18          wherein the first and second storage library modules are void of media element handling assembly hardware for moving the picker assembly through the channel along the frame length;
  - 21          wherein the picker assembly is operable for moving through the channel along the frame length in order to move toward the first frame length position and manipulate media elements held by the first set of cells, and to move toward the second frame length position and manipulate media elements held by the second set of cells when the second storage library module is mounted to the frame.
- 1           2. A storage library comprising:
  - 2           a frame having top and bottom ends and an interior, the top and bottom frame ends being separated by a frame length;

4                   a media element handling assembly having a support and a picker  
5       assembly, the support being connected to the top frame end, the picker assembly  
6       being movably connected to the support;

7                   a first storage library module having a first set of media element  
8       holding cells, the first storage library module being mounted to the frame beneath  
9       the top frame end at a first position along the frame length, the frame supporting the  
10      first storage library module such that the first set of cells are positioned within the  
11      frame interior at the first frame length position and along the periphery of a channel  
12      extending within the frame interior between the top and bottom frame ends through  
13      the frame length;

14                  a second storage library module having a second set of media element  
15       holding cells, the second storage library module being mountable to the frame  
16       beneath the top frame end at a second position along the frame length, the frame  
17       supporting the second storage library module when the second storage library  
18       module is mounted to the frame such that the second set of cells are positioned  
19       within the frame interior at the second frame length position and along the periphery  
20       of the channel;

21                  wherein the first and second storage library modules are void of  
22       media element handling assembly hardware for moving the picker assembly through  
23       the channel along the frame length;

24                  wherein the picker assembly is operable for moving through the  
25       channel along the frame length between the top and bottom frame ends in order to  
26       move toward the first frame length position and manipulate media elements held by  
27       the first set of cells, and to move toward the second frame length position and  
28       manipulate media elements held by the second set of cells when the second storage  
29       library module is mounted to the frame.

1                  3.       The library of claim 2 further comprising:

2                  a third storage library module having a media element player and  
3       being void of media element handling assembly hardware for moving the picker  
4       assembly through the channel along the frame length, the third storage library  
5       module being mountable to the frame beneath the top frame end at a third position  
6       along the frame length, the frame supporting the third storage library module when

7 the third storage library module is mounted to the frame such that the media element  
8 player is positioned within the frame interior at the third frame length position and  
9 along the periphery of the channel;

10 wherein the picker assembly is operable for moving through the  
11 channel in order to move toward the first and third frame length positions and load  
12 media elements held by the first set of cells into the media element player when the  
13 third storage library module is mounted to the frame.

1 4. A storage library comprising:

2 a frame having top and bottom ends and an interior, the top and  
3 bottom frame ends being separated by a frame length;

4 a first storage library module having a first set of media element  
5 holding cells, the first storage library module being mounted to the frame beneath  
6 the top frame end at a first position along the frame length, the frame supporting the  
7 first storage library module such that the first set of cells are positioned within the  
8 frame interior at the first frame length position and along the periphery of a channel  
9 extending within the frame interior between the top and bottom frame ends through  
10 the frame length; and

11 a media element handling assembly having a support and a picker  
12 assembly, the support being connected to the top frame end, the picker assembly  
13 being movably connected to the support such that the picker assembly is operable  
14 for moving through the channel along the frame length between the top and bottom  
15 frame ends in order to move toward the first frame length position and manipulate  
16 media elements held by the first set of cells while being connected to the support.

1 5. The library of claim 4 wherein:

2 the first storage library module is void of media element handling  
3 assembly hardware for moving the picker assembly through the channel.

1 6. The library of claim 4 further comprising:

2 a second storage library module having a second set of media element  
3 holding cells, the second storage library module being mountable to the frame  
4 beneath the top frame end at a second position along the frame length, the frame

5 supporting the second storage library module when the second storage library is  
6 mounted to the frame such that the second set of cells are positioned within the  
7 frame interior at the second frame length position and along the periphery of the  
8 channel;

9               wherein the picker assembly is operable for moving through the  
10 channel along the frame length between the top and bottom frame ends in order to  
11 move toward the second frame length position and manipulate media elements held  
12 by the second set of cells while being connected to the support when the second  
13 storage library module is mounted to the frame.

1               7.       The library of claim 6 wherein:

2               the second storage library module is void of media element handling  
3               assembly hardware for moving the picker assembly through the channel.

1               8.       The library of claim 6 wherein:

2               the first storage library module further includes a first media player,  
3               the frame supporting the first storage library module such that the first media player  
4               is positioned within the frame interior at the first frame length position on the  
5               periphery of the channel;

6               wherein the picker assembly is operable for moving through the  
7               channel in order to move toward the first and second frame length positions and load  
8               media elements held by the first and second sets of cells into the first media player  
9               while being connected to the support when the second storage library module is  
10          mounted to the frame.

1               9.       The library of claim 4 wherein:

2               the media element handling assembly further includes a platform and  
3               a suspension drive mechanism, the suspension drive mechanism being connected to  
4               the support, the platform being movably connected to the suspension drive  
5               mechanism and the picker assembly being supported on the platform, wherein the  
6               suspension drive mechanism movably suspends the platform away from the support  
7               in order to move the picker assembly through the channel along the frame length  
8               from the top frame end to the bottom frame end.

- 1           10.     The library of claim 9 wherein:  
2                 the suspension drive mechanism movably retracts the platform back  
3                 towards the support in order to move the picker assembly through the channel along  
4                 the frame length from the bottom frame end to the top frame end.
  
- 1           11.     The library of claim 9 wherein:  
2                 the platform includes a carriage assembly operable for moving the  
3                 picker assembly across the platform.
  
- 1           12.     The library of claim 9 wherein:  
2                 the picker assembly is rotatably supported on the platform.
  
- 1           13.     The library of claim 9 wherein:  
2                 the media element handling assembly further includes a  
3                 communication cable connected at one end to the picker assembly via the platform  
4                 and connected at the other end to the support, the communication cable being  
5                 operable to suspend out from the support as the platform moves away from the  
6                 support, the communication cable enabling communication with the picker  
7                 assembly.
  
- 1           14.     The library of claim 10 wherein:  
2                 the suspension drive mechanism includes suspension cables connected  
3                 to the platform for movably suspending the platform away and toward the support.
  
- 1           15.     The library of claim 10 wherein:  
2                 the suspension drive mechanism includes scissor legs connected to the  
3                 platform for movably suspending the platform away and toward the support.  
4                 support.
  
- 1           16.     The library of claim 4 wherein:  
2                 the top and bottom frame ends are vertically separated by the frame  
3                 length.

1                   17. A storage library comprising:  
2                    a frame having top and bottom ends and an interior, the top and  
3                    bottom frame ends being separated by a frame length;  
4                    a media element handling assembly having a support and a picker  
5                    assembly, the support being connected to the bottom frame end, the picker assembly  
6                    being movably connected to the support;  
7                    a first storage library module having a first set of media element  
8                    holding cells, the first storage library module being mounted to the frame above the  
9                    bottom frame end at a first position along the frame length, the frame supporting the  
10                  first storage library module such that the first set of cells are positioned within the  
11                  frame interior at the first frame length position and along the periphery of a channel  
12                  extending within the frame interior between the top and bottom frame ends through  
13                  the frame length;  
14                  a second storage library module having a second set of media element  
15                  holding cells, the second storage library module being mountable to the frame above  
16                  the bottom frame end at a second position along the frame length, the frame  
17                  supporting the second storage library module when the second storage library  
18                  module is mounted to the frame such that the second set of cells are positioned  
19                  within the frame interior at the second frame length position and along the periphery  
20                  of the channel;  
21                  wherein the first and second storage library modules are void of  
22                  media element handling assembly hardware for moving the picker assembly through  
23                  the channel along the frame length;  
24                  wherein the picker assembly is operable for moving through the  
25                  channel along the frame length between the top and bottom frame ends in order to  
26                  move toward the first frame length position and manipulate media elements held by  
27                  the first set of cells, and in order to move toward the second frame length position  
28                  and manipulate media elements held by the second set of cells when the second  
29                  storage library module is mounted to the frame.

1                   18. A method for a storage library having a frame with an interior  
2                  and a frame length, the storage library further having a media element handling

3 assembly having a support and a picker assembly movably connected to the support  
4 with the support being connected to the frame, the method comprising:

5                 mounting a first storage library module having a first set of media  
6 element holding cells to the frame at a first position along the frame length away  
7 from the support such that the first set of cells are positioned within the frame  
8 interior at the first frame length position and along the periphery of a channel  
9 extending within the frame interior through the frame length;

10                 moving the picker assembly through the channel along the frame  
11 length in order to move the picker assembly toward the first set of cells for the  
12 picker assembly to manipulate media elements held by the first set of cells while the  
13 picker assembly is movably connected to the support;

14                 after the picker assembly has manipulated a media element held by  
15 one of the first set of cells, expanding the capacity of the storage library by  
16 mounting a second storage library module having a second set of media element  
17 holding cells to the frame at a second position along the frame length away from the  
18 support such that the second set of cells are positioned within the frame interior at  
19 the second frame length position and along the periphery of the channel; and

20                 moving the picker assembly through the channel along the frame  
21 length in order to move the picker assembly toward the second set of cells for the  
22 picker assembly to manipulate media elements held by the second set of cells while  
23 the picker assembly is movably connected to the support.

1                 19.         The method of claim 18 further comprising:

2                 after the picker assembly has manipulated a media element held by  
3 one of the second set of cells, expanding the capacity of the storage library further  
4 by mounting a third storage library module having a third set of media element  
5 holding cells to the frame at a third position along the frame length away from the  
6 support such that the third set of cells are positioned within the frame interior at the  
7 third frame length position and along the periphery of the channel; and

8                 moving the picker assembly through the channel along the frame  
9 length in order to move the picker assembly toward the third set of cells for the  
10 picker assembly to manipulate media elements held by the third set of cells while the  
11 picker assembly is movably connected to the support.

1                   20. The method of claim 18 further comprising:  
2                   after the picker assembly has manipulated a media element held by  
3                   one of the first set of cells, reducing the capacity of the storage library by  
4                   dismounting one of the first and second storage library modules from the frame; and  
5                   moving the picker assembly through the channel along the frame  
6                   length in order to move the picker assembly toward the set of cells remaining within  
7                   the frame interior for the picker assembly to manipulate media elements held by the  
8                   remaining set of cells while the picker assembly is movably connected to the  
9                   support.